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Model-independent approach to the neutron-star-matter equation of state

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I will discuss recent developments in inferring the equation of state of zero-temperature beta-equilibrated QCD matter using only ab-initio theoretical results at low and high densities together with robust observational data. In particular, I will introduce a novel method for interpolating the equation of state that allows one to accurately keep track of the speed of sound of neutron-star matter, thereby facilitating a more detailed analysis of the properties of matter in the cores of neutron stars of different masses. Using results obtained with the new interpolation scheme, I will argue that the matter located in the centers of massive neutron stars is likely to exhibit properties consistent with those of deconfined quark matter.

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